COURTNEY M. PRICE
VICE PRESIDENT
CHEMSTAR

American Chemistry Council Good Chemistry Makes It Possible

VIA HAND DELIVERY

June 25, 2001

The Honorable Christine T. Whitman
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: OPPTS-00274D; Voluntary Children's Chemical Evaluation Program (VCCEP)

Dear Administrator Whitman:

The American Chemistry Council Ketones Panel is responding to the notice published in the December 26, 2000, *Federal Register* (FR) announcing the pilot of the Voluntary Children's Chemical Evaluation Program (VCCEP). The Panel includes the major U.S. manufacturers of methyl ethyl ketone (MEK), CAS number 78-93-3. A consortium has been formed under the Panel to sponsor MEK under Tier 1 of the VCCEP. Members of the Consortium include Celanese, ExxonMobil Chemical Company, Shell Chemical Company, and E.I du Pont de Nemours & Co.

As described further below, MEK has undergone several previous reviews by EPA and others, including a review under the OECD Screening Information Data Set (SIDS) program for which the United States was the sponsor country. These reviews recognize that MEK has low toxicity, and several expressly concluded that additional data on MEK are not required. However, because the VCCEP process represents a new paradigm for EPA, the Panel is sponsoring MEK in order to facilitate a "test" of this new chemical evaluation process. The Panel firmly believes that MEK does not pose a risk to human health, including that of children and prospective parents. This conclusion is strongly supported by the previous reviews of MEK.

We understand that sponsoring a chemical in Tier 1 of the VCCEP pilot means that the Consortium and its member companies have made a voluntary commitment to develop hazard and exposure data, consistent with the requirements of. Tier 1 of the pilot program. The Consortium's start date for MEK data development is on or before December 15, 2001. This date has been chosen to allow Consortium members to attend EPA-sponsored workshops on exposure requirements before undertaking efforts

in that area. The Consortium has not yet determined a submission date for Tier 1 information, but will make every effort to develop the Tier 1 submissions for MEK in a timely fashion and fully expect to do so in 2002.

As recognized in EPA's announcement of the VCCEP pilot, sponsorship commitments are not enforceable agreements or contracts. If for any reason this voluntary initiative will not be undertaken under the Panel, any expressed or implied commitment to Tier 1 of the VCCEP will devolve to the manufacturers and importers of MEK.

The previous EPA reviews of MEK included a 1998 review that concluded as follows: "Available data indicate that MEK has low acute toxicity. . . . Available data indicate that MEK has low chronic toxicity. . . . [T]he concern for developmental toxicity appears to be low. . . . [T]he concern for reproductive toxicity appears to be low. . . . [S]everal well-designed repeated-dose oral and inhalation studies in laboratory animals demonstrate low systemic toxicity with MEK. . . . [T]here is no convincing experimental evidence that MEK is neurotoxic. . . . The hazard assessment strongly indicates that . . . MEK has low acute and chronic (systemic) toxicity in that effects occur only at high doses."[1]

MEK's sponsorship through the OECD SIDS process was analogous to Tier 1 of the VCCEP Pilot Program and resulted in similar conclusions.[2] As part of that assessment process, EPA found, and international scientists agreed, that MEK has "a low order of toxicity" and is "a low priority for further work."

On at least *three* other occasions, EPA has decided that further toxicity testing of MEK is *not* warranted. First, on the basis of work done under a voluntary testing agreement with MEK producers, EPA decided that additional testing under a TSCA test rule was unnecessary.[3] Significantly, EPA specifically concluded that chronic toxicity testing of MEK was *not warranted* because *virtually no effects were observed in a 13-week subchronic toxicity study of MEK at exposure concentrations of up to 5000 ppm.* Moroever, the study was expressly found to be *"adequate to predict chronic toxicity of MEK."*[4] Further, in a 1990 report to Congress, MEK was specifically

---

1 *63 Fed. Reg.* 15195, 15197-99 (March 30, 1998).

2 The SIDS process is an international chemical screening and assessment program sponsored by the Organization for Economic Cooperation and Development (OECD). The United States was the sponsor country for MEK. The Ketones Panel prepared the SIDS Dossier and SIDS Initial Assessment Report (SIAR) for MEK, which documents were reviewed and accepted by EPA scientists. Thus, MEK producers have already sponsored MEK in an international assessment similar to Tier 1 of the VCCEP pilot.

3 See 47 *Fed. Reg.* 58025, 58027 (December 29, 1982) (response to Interagency Testing Committee; 48 *Fed. Reg.* 44905 (Sept. 30, 1983) (Decision to Adopt Negotiated Testing Program); 56 *Fed. Reg.* 67424, 67428 (December 30,199 1) (noting removal of MEK from the TSCA section 4(e) Priority Testing list).

4 *See 47 Fed. Reg.* at 58027.

identified as one of several compounds for which testing data were considered "complete." In 1993, EPA promulgated a neurotoxicity endpoint test rule for ten solvents, but expressly excluded MEK because existing data were deemed "adequate."[5] The Agency concluded that "[r]esources would be better spent on the study of chemicals about which less is known."[6] In 1996, MEK was not included in a test rule for hazardous air pollutants, even though it clearly met the criteria based on volume of air emissions (greater than 50 tons/year), presumably because OPPT and OAQPS considered additional testing unnecessary to support the objectives of the testing initiative.

MEK's inclusion in the VCCEP pilot rests primarily on the fact that MEK was found in the blood of subjects in the NHANES study[7] at a median concentration of 5.4 ppb. However, these levels are approximately two orders of magnitude below the levels that would be expected following exposure to MEK at the inhalation reference concentration (RfC) found in EPA's IRIS database, which EPA scientists have concluded is safe over a lifetime of continuous exposure even for sensitive subgroups. In other words, the NHANES findings provide no cause for concern regarding general population exposure to MEK and, indeed, confirm prior conclusions that MEK poses a low toxicity concern.

It is important in this context to recognize that MEK is naturally present in the environment. MEK is emitted to the atmosphere from such natural sources as European firs, junipers, cedars, cypress trees and ferns,[8] and has been identified as a natural component of several foods,[9] including roasted barley, cheddar cheese, bread,

---

5 58 *Fed. Reg.* 40262, 40269 (July 27, 1993) (Multi-Substance Rule for the Testing of Neurotoxicity - Final Rule).

6 See "Selection of Chemicals for Testing Under Neurotoxicity Endpoint Rule," Memorandum from Suzanne B. McMaster, Toxic Effects Section, Toxic Effects Branch, Health and Environmental Review Division (TS-796) to Gary E. Timm, Chief, Chemical Testing Branch, Existing Chemical Assessment Division (TS-778), U.S. EPA, July 26, 1990.

7 U.S. Environmental Protection Agency, *"'Straw Proposal" for Discussion Purposes: Framework for a Voluntary Children's Chemical Evaluation Program,* 1 (Draft – April 10, 2000) (the "Straw Proposal").

8 See Isidorov V.A., Zenkevich I.G., Ioffe B.V. (1985). Volatile Organic Compounds in the Atmosphere of Forests. *Atmos. Environ.* 19: 1-8.

9 See Lande, S., Durkin, P., Christopher, D., Howard, P., Saxena, J., Syracuse Research Corp. (1976). Investigation of Selected Potential Environmental Contaminants; Ketonic Solvents, prepared for Office of Toxic Substances, Environmental Protection Agency.

honey, chicken, roasted nuts, oranges, nectarines, black tea, and rum. [10] MEK has been detected in dried beans, split peas and lentils at 148,000, 110,000 and 50,000 ppb. [11]

In summary, the Panel firmly believes that MEK does not pose a risk to human health, including that of children and prospective parents. This conclusion is strongly supported by the previous reviews of MEK. In spite of previously mentioned EPA reviews, the Panel has agreed to sponsor MEK under Tier 1 of the VCCEP pilot to facilitate the review of the VCCEP process.

The technical contact for this activity is:

Andrew Jaques
Manager, Ketones Panel
American Chemistry Council
1300 Wilson Blvd.
Arlington, VA 22205
Phone: 703-741-5627
Fax: 703-741-609 1
E-mail: Andrew-Jaques@americanchemistry.com

Please contact Mr. Jaques if you have any questions regarding this commitment.

Sincerely yours,

Courtney M. Price,
Vice-President, CHEMSTAR

cc: U.S. EPA, Document Control Office (7407)
Office of Pollution Prevention and Toxics

Stephen Johnson, Assistant Administrator
Office of Prevention, Pesticides and Toxic Substances

Charles Auer, Director

---

[10] See Dumant J.P and Adda J. (1978). Occurrence of Sesquiterpenes in Mountain Cheese Volatiles. J. *Agric. Food Chem.* 26: 364-67; Gordon, D.T. and Morgan, M.E. (1979). Principal Volatile Compounds in Feed Flavored Milk. *J. Dairy Sci.* 55: 905-12; Takeoka, G.R., Flath R.A. and Guntert, M. (1988). Nectarine Volatiles: Vacuum Steam Distillation Versus Headspace Sampling. *J. Agric. Food Chem. 36: 553-60.*

[11] See Lovegreen, N.V., Fisher, G. S ., Legendr, M.G. and Schuller, W.H. (1979). Volatile Constituents of Dried Legumes. *J. Agric. Food Chem. 27: 85* l-53.

Chemical Control Division
Office of Pollution Prevention and Toxics